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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,893	04/16/2004	Kent S. Tarbutton	56847US007	2224
32692	7590	04/19/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			TO, TOAN C	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/826,893	Applicant(s) TARBUTTON ET AL.	
	Examiner Toan C. To	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17, 19, 22-31 and 33-42 is/are pending in the application.
- 4a) Of the above claim(s) 33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17, 19, 22-31, 35, 36, 41 and 42 is/are rejected.
- 7) ☒ Claim(s) 37-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Recitation "an angle of greater than or less than 180 degrees" in claim 26 is unclear, since it is not known what degrees of angle being claimed.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17, 22-28, 30-31, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Joslin (U.S. 3,210,102).

As to claims 17, 25, and 30-31, Joslin discloses a "hydroformable" frame comprising: a female tube portion (12) and a male tube portion (10), a portion of said female tube portion (12) being disposed about a portion of said male tube portion (10); a groove (16) disposed in at least one of said male tube portion (10) and said female tube portion (12) to form an annular region between said male tube portion and said female

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tube portion; and a cured adhesive (28) disposed in said annular region between said male tube portion and said female tube portion so as to form a bonded joint, wherein, said bonded joint is able to withstand a hydroforming of said frame into a final shape substantially without leakage and maintain sufficient strength, fatigue resistance and durability to be utilized within said frame, wherein, said article forms part of a structural frame member of a vehicle frame; wherein, the female tube portion (12) and male tube portion have been permanently deformed by hydroforming; wherein said cured adhesive (28), as well as said female tube portion (12) and said male tube portion (10), has been permanently deformed by hydroforming (the pipe coupling of Joslin is capable of deforming by a hydroformed process).

As to claims 22-24, Joslin discloses a hydroformable frame, wherein the article is capable of withstanding hydroforming pressure greater than about 5000psi, the adhesive has a minimum shear yield strength of at least 5000psi, and the male and female tube portion are each made of steel that has a minimum yield strength of at least about 30,000psi (see column 4, lines 1-12);

As to claims 25-28, Joslin discloses an frame as claimed, wherein said female tube (12) portion includes a remainder portion outside of said joint, said male tube portion (10) includes a remainder portion outside of said joint (see figure 2a), and the remainder portion of said male tube portion being disposed at an angle of less than 180 degrees to the remainder portion of said female tube portion; and the remainder portion of the female tube (12) and the remainder portion of the male tube (10) form an L-shape

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(see figure 2a), wherein the groove is formed in the male tube portion (10), and the female tube portion does not contain a groove.

As to claim 35, Joslin discloses an frame, wherein said groove (16) has a groove depth, said male tube portion (10) and said female tube portion (12) have a fit-up clearance, and the ratio of the groove (16) depth to fit-up clearance is sufficient to prevent bypass leakage of said adhesive beyond said joint, when said adhesive (14) in an uncured state is disposed in said annular region.

With respect to the recitation in the preamble that the frame is "hydroformed", such does not limit the structure of the claimed invention.

5. Claims 17, 19, 25, 29-31, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Isaac et al (U.S. 5,613,794).

Isaac et al discloses a "hydroformable" vehicle frame comprising: a female tube portion (122) and a male tube portion (124), a portion of said female tube portion (122) being disposed about a portion of said male tube portion (124); a groove (162) disposed in at least one of said male tube portion (124) and said female tube portion (122) to form an annular region between said male tube portion and said female tube portion; and a cured adhesive (152) disposed in said annular region between said male tube portion and said female tube portion so as to form a bonded joint, wherein, said bonded joint is able to withstand a hydroforming of said frame into a final shape substantially without leakage and maintain sufficient strength, fatigue resistance and durability to be utilized within said frame, wherein, said article forms part of a structural frame member of a vehicle frame; wherein, the female tube portion (122) and male tube portion have been

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permanently deformed by hydroforming; wherein said cured adhesive (152), as well as said female tube portion (122) and said male tube portion (124), has been permanently deformed by hydroforming (the pipe coupling of Isaac et al is capable of deforming by a hydroformed process); wherein the vehicle frame being in the form of a birdcage structure (see figure 9).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Joslin in view of Emmons (U.S. 6,102,605)

Joslin discloses every element of the invention as discussed above except that the male and female tube portions are made of steel having a yield strength of at least 50 kpsi.

Emmons teaches the tubular frames are made of steel having 120 kpsi yield strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the frame of Joslin by having his frame made of steel with at least 50 kpsi in yield strength as taught by Emmons, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of

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its suitability for the intended use as a matter of obvious design choice. *In re Leshin* 125 USPQ 416.

### ***Response to Arguments***

8. Applicant's arguments filed February 9, 2006 have been fully considered but they are not persuasive. The prior art still read on the claimed limitations.

In response to applicant's arguments that Joslin does not disclose the male and female pipes are bonded together with an adhesive, the examiner respectfully disagrees because Joslin discloses a sealant material 28 disposed in a groove between the female pipe 12 and the male pipe, and the sealant material is epoxy polyamide resin (see column 3, line 55), and it is well known in the art that the epoxy polyamide resin has an adhesive characteristic, therefore the sealant 28 is considered as an adhesive material to bond the female pipe 12 and male pipe 10 together.

In response to applicant's arguments that Joslin does not disclose the joint is capable of withstanding a hydroforming process substantially without leakage, the examiner respectfully disagrees because MPEP 2113 states that:

"[Even] though product-by process claims are limited by and define by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claims is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by different process."

The claims are product claims, but "hydroforming" is a process of forming the frame into a final shape. Based on the above statement of the MPEP, although, no

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where in Joslin discloses "hydroforming", but the claims are still considered to be unpatentable by Joslin, since Joslin discloses all the structural limitations except for the process limitation as to "hydroforming".

In response to applicant's arguments to the rejection of the claims under 35 U.S.C 103, the rejection is now withdrawn in view of the amendment to the claims.

***Allowable Subject Matter***

9. Claims 37-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C. To whose telephone number is (571) 272-6677. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTo  
April 13, 2006

  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600